tissues as well. The third plane of sutures unite the external oblique aponeurosis to Poupart's ligament, the stitches being placed deeply into the other layers. Toward the median line, where there are no fibres of the internal oblique, there are only two layers; here the aponeurosis of the external oblique is united to Poupart's ligament, the stitches including the posterior layer. At the external ring the two pillars of the external oblique are united, the stitches including the posterior layer and an opening being left for the exit of the cord.

The entire canal is thus closed and made firm by contracting scar-tissue.

The skin suture is in two layers, the first taking in the connective-tissue layer, the second approximating the skin edges, the object being to exclude any area where suppuration could take place. An antiseptic compressing-dressing is used to prevent the formation of a hæmatoma of the scrotum.

Sixty-one Cases of Partial and Complete Excision of the Tongue.—WHEELER (*Dublin Journal of Medical Sciences*, April, 1897) says that out of sixty-one operations performed by him for malignant disease, none died from the effects of the operation, save one, a male on whom he operated by Kocher's method modified; he died of asthenia. He did not tracheotomize him.

Of the sixty-one cases, in twenty-nine the disease returned. Many of these operations were performed not with a view to cure, but merely to relieve and remove a foul, sloughing, fetid mass, and thus render existence more tolerable. Twenty-two cases he was not able to trace at all directly himself. He heard indirectly that five were healthy three or four years after operation.

Seven others had had no return of the disease, to his own personal knowledge, one to fifteen years after operation, while three had no return seven, three, and two months after operation.

There is only one prognosis for unoperated lingual carcinoma—death; and a like prognosis for a large number of operated cases. That complete recovery does take place, he believes to be undoubted, as shown by his own cases.

The kindly healing of wounds in the mouth is not due to the bactericidal action of the saliva, but to the outpouring of leucocytes which its presence in these wounds always induces.

He considers it expedient to ligate the external carotid before removing the tongue, tonsils, and part of the palate; but preliminary ligature of the lingual arteries in excision of the tongue, as recommended by Mirault, is not required; there is no hemorrhage from the ranine arteries to cause alarm, and, as the operation upon the tongue is frequently postponed until the wounds for deligating the lingual vessels heal, the disease in the mouth is increasing and may be infecting the patient. The author believes it is good surgery to remove the tongue first and then the diseased glands later, if it is necessary to do the operation in two stages.

The inflammation in the glands usually subsides a little, and the glands can then be more readily removed, and the connective tissue will be a guide to the lymphatic glands deeper in the neck, where the lymphatics directly communicate.

The author has performed all the recent operations, but prefers the thermocautery scissors when suitable. It is an admirable instrument in the majority of cases of lingual cancer where the disease is not too extensive. He never uses a ligature through the tongue. The tongue is held by toothed forceps, and just as the ranine arteries are about to be severed the hot blade is allowed to cool a little, in order to allow the arteries to bleed; they are then secured and ligated. Frequent sprays are the best antiseptics.

The Resection of the Liver.—AUVRAY (*Rev. de Chir.*, 1897, No. 4) has conducted a study of the possibilities of resection of the liver in the human being on animals that leads him to conclude that the procedure is applicable, in the living, to the ablation of tumors and cysts situated in the parenchyma of the liver, so long as they are not placed too deeply in the abdomen; that is, if they, for example, are situated in the left lobe or on the costal margins.

The method consists in passing through and through the parenchyma of the liver, outside of the line of resection, two interlooped sutures, which are so arranged that the various loops formed by each include and ligate the vessels of definite portions of the parenchyma in a continuous series.

Osteoplastic Closure of Bone-cavities.—OLIER (*Rev. de Chir.*, 1897, No. 4) speaks of the great difficulty experienced in the healing of wounds and the filling in of cavities produced by the removal of diseased spongy tissues from bones, especially the long bones, and, after studying the divers phases of the question, comes to the following conclusions:

1. Cavities in bones, whether abnormal, accidental, pathological, or following operations, fill up slowly, especially when they are deep, on account of the rigidity of their walls, which do not retract.. They cannot be filled by the granulations of medullary origin which form on their walls, at least when the subjects are not young and in a plastic condition. In tuberculous cases the difficulty is always very great.

2. In the long bones, as the tibia, after removal of the medullary substance, the repair is so tedious that it seems almost impossible to heal them. Of the short bones, the calcaneum is especially exposed to this slow repair where it has been reduced to but a thin wall.

3. The method to employ in healing these cavities is to remove or make movable one of the walls to permit, in the first case, the periosteum to reach the opposite wall, and, in the second, to place the osseous walls in contact.

4. When one of the bony walls is removed, the corresponding periosteum and soft tissues which cover it are pressed into the centre of the cavity and come in contact with the opposite wall. The strength of the bone is momentarily decreased by this procedure, but the formation of osseous tissue on the inner surface of the periosteum finally gives the necessary solidity. This is particularly true in cases of hypertrophy of the bone from osteomyelitis.

5. Outside of these cases, where hypertrophy has taken place it is better not to sacrifice the bone, but to form a flap which shall, according to the case, approach or be fixed to the opposite wall by metallic sutures. As soon as